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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,969	03/07/2005	Guobiao Zhang	P70465US0	7961

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EXAMINER	
LUKS, JEREMY AUSTIN	
ART UNIT	PAPER NUMBER
2837	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,969	ZHANG, GUOBIAO	
	Examiner	Art Unit	
	JEREMY LUKS	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-3, 5, 6, 14-23, 25 and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama (4,048,968).

With respect to Claims 1-3, 5 and 6, Aoyama a device comprising a casing (Figures 1-2, #24 – exterior portion of passage #24 could be a casing) within which are a gas inlet (12), a gas chamber (defined by passage #24) and a gas outlet (portion of passage #24 downstream of valve #48), characterized in that a throttling device (48) is located in a gas flow route (passage 24) and controlled by pressure of the gas flow, wherein a cross sectional area of the gas flow of the throttling device (48) reduces when pressure of the gas flow increases (Col. 4, Lines 10-57). Because the valve structure is actuated in response to the pressure (regardless of whether it is direct or indirect), the structure satisfies this limitation. Aoyama further teaches wherein the throttling device (48) controlled by pressure of gas flow is a pressure reducing valves structure; wherein the pressure reducing valves structure includes an adjusting device (56) and a throttling member (48); wherein the throttling device comprises an open and close member (52) and a fixture (54); and wherein the structure of the open and close member (52) is characterized in that a cross sectional area of its first surface subjecting to gas pressure

from the gas inlet is larger than a cross sectional area of its second surface (surface connected to lever #54) that is opposite to the first surface and exposes to the gas outlet (end passage #24 downstream of valve #48) (structure of member #52 clearly seen). Aoyama fails to teach wherein the device is incorporated into a muffler device. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. If the prior art structure is capable of performing the intended use, then it meets the claim. Ex Parte Masham, 2 USPQ F.2d 1647 (1987). Because Aoyama provides all of the structure elements, it is capable of performing the claimed functions. Additionally, the prior art structure achieves the goal of maintaining pressure on both sides of the closure member, as is the goal of Applicant's invention.

With respect to Claims 14-23, 25 and 27, Aoyama teaches wherein the device comprises a pressure sensor (Figures 1-2, #64) member which is connected with the throttling device (48) and senses the pressure of muffled gas flow (Col. 4, Lines 10-27); wherein the pressure sensor member (64) senses the pressure of muffled gas flow in the outlet chamber outlet (portion of passage #24 downstream of valve #48) or any place downstream in the gas flow route of the outlet chamber outlet (portion of passage #24 downstream of valve #48) (Col. 3, Lines 16-25 – sensor); wherein the pressure sensor member (64) is a diaphragm (Col. 3, Lines10-11); wherein the device comprises a spring (74) which is connected with the combination of the pressure sensor member (64) and the throttling device (48); wherein the spring (64) is connected with the

pressure sensor (64) (Col. 3, Lines 29-32); wherein the other end of the spring (74) is connected with the casing (58); wherein the part of casing (58) which is connecting the spring (74) form a spring chamber (entire housing #58 could be a spring chamber); and wherein the spring chamber (housing #58) comprises a balancing hole (66) communicating with the atmosphere (Col. 3, Lines 12-13).

2. Claims 4 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama (4,048,968) in view of Murray (3,219,144). Aoyama is relied upon for the reasons and disclosures set forth above. Aoyama further teaches wherein the adjusting device (Figures 1-2, #56), comprises a spring (74), an energy sensor member (64) and a connection lever (54) which are connected in series; wherein the throttling device comprises an open and close member (52) and a fixture (54); and wherein the structure of the open and close member (52) is characterized in that a cross sectional area of its first surface subjecting to gas pressure from the gas inlet is larger than a cross sectional area of its second surface (surface connected to lever #54) that is opposite to the first surface and exposes to the gas outlet (portion of passage #24 downstream of valve #48) (structure of member #52 clearly seen); wherein the energy sensor member (64) is a diaphragm (Col. 3, Lines 10-11); wherein the connection lever (54) of the adjusting device (56) is connected with the second surface (surface connected to lever #54) of the open and close member (52); wherein a spring chamber (58) is connected with the gas chamber (defined by passage #24 – notes that spring chamber #54 sits on top of passage #24); wherein the spring (74) is located within the spring chamber (58); and wherein the spring chamber comprises a balancing hole (66) communicating with the

atmosphere (Col. 3, Lines 12-13); wherein gas flow discharged from the gas outlet (portion of passage #24 downstream of valve #48) is continuous, stable and without pulsation (Col. 4, Lines 44-57). Further, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. If the prior art structure is capable of performing the intended use, then it meets the claim. Ex Parte Masham, 2 USPQ F.2d 1647 (1987). Because Aoyama provides all of the structure elements, in addition to maintaining the pressure in passage #24, the device will operate as claimed. Aoyama fails to teach wherein the adjusting device comprises a manual adjusting device; wherein the spring and a part of the manual adjusting device are located within the spring chamber. Murray teaches a manual-adjusting device (Figure 1, #16) (Col. 1, Line 70 – Col. 2, Line 3), and wherein a spring (4) and a part of the manual adjusting device (16) are located within the spring chamber (tube #1 could be a spring chamber). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Aoyama, with the apparatus of Murray to adjust the tension of the spring for repair or optimization.

Response to Arguments

3. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection. The examiner considers the obvious

combination of Aoyama and Murray to teach all of the limitations as claimed by Applicant.

4. In response to Applicant's argument that Aoyama's valve #48 is not a throttling device wherein the cross sectional area of the throttling device reduces when pressure of gas flow increases, the Examiner disagrees. Because the cross sectional area of valve #48 increase to reduce pressure, it is obvious that it will do the opposite, and decrease or reduce in response to a pressure increase.

5. In response to applicant's argument that the goal and function of Aoyama is different that Applicant's, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Aoyama appears to teach all of the structural elements of Applicant's claimed invention, and therefor it is capable of functioning in the same manner. Further, Applicants argues the difference in goals of Aoyama and the present Application, however, these stated goals are not claimed in such a manner as to differentiate Applicant's structure from the Aoyama's structure. The structure of Aoyama's valve device #48 is identical to Applicant's valve structure. Applicant must claim a structural difference from the cited prior art in order for at least the independent claim to not be obvious over the prior art of record.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY LUKS whose telephone number is (571)272-2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571) 272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeremy Luks/
Examiner, Art Unit 2837

/Jeffrey Donels/

Primary Examiner, Art Unit 2837